STEREO AMPLIFIER

KA-4520

SERVICE MANUAL

KENWOOD

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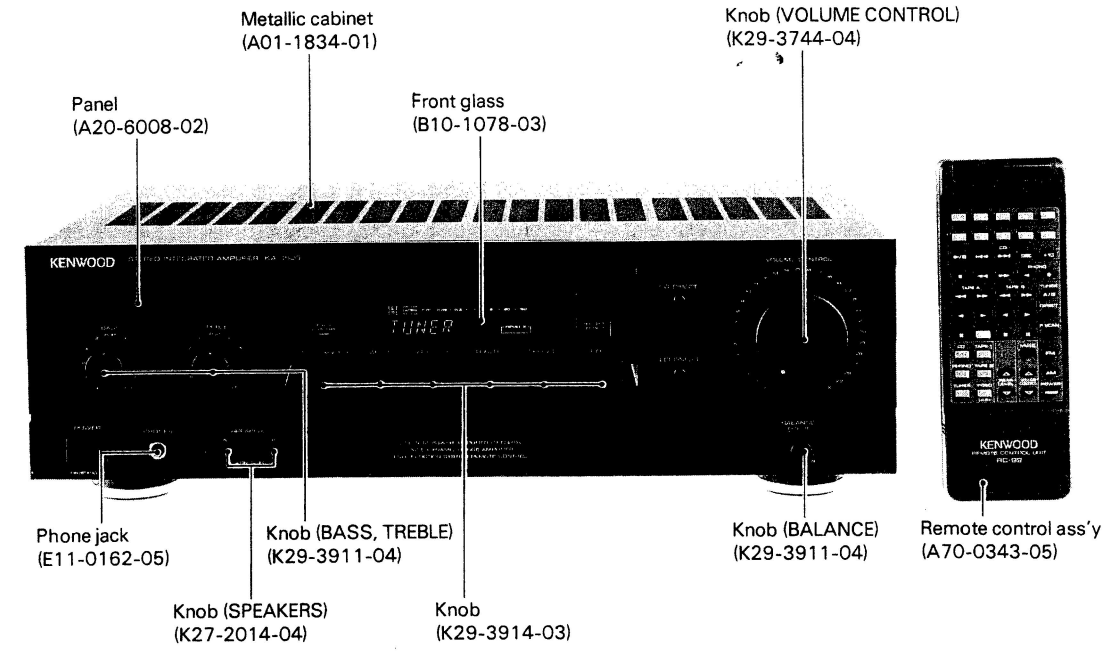
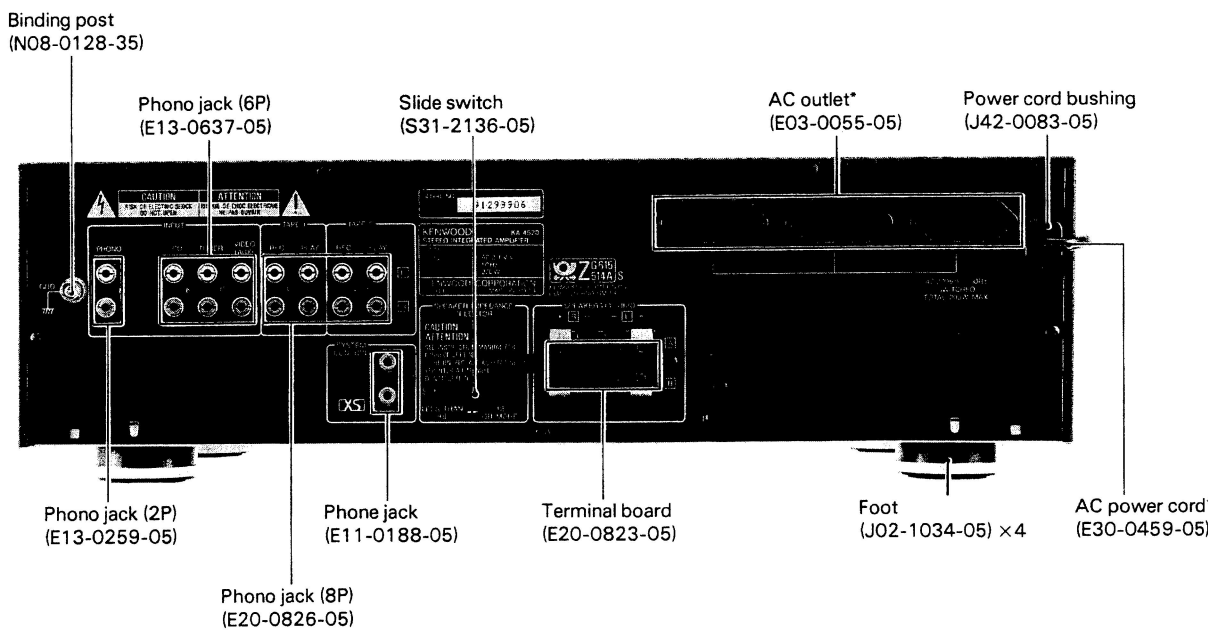
B51-4144-00(S)1078



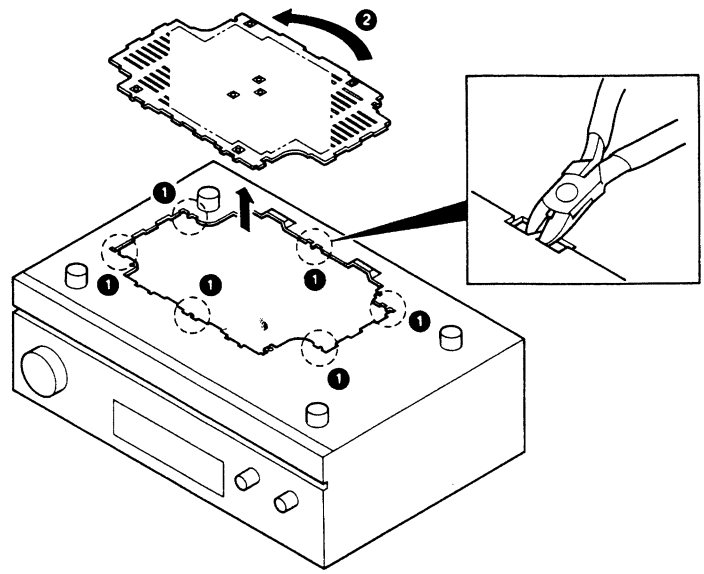


KA-4520

DISASSEMBLY FOR REPAIR

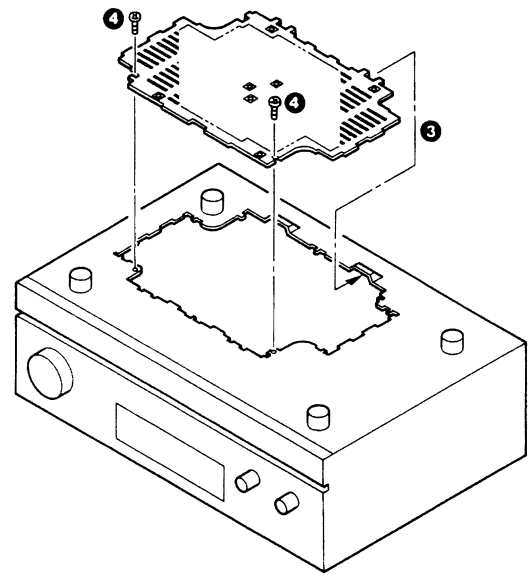
How to remove the repairing chassis

1 Cut the 6 parts ❶ of the repairing chassis. Remove the repairing chassis from main chassis.



After repair

2 Turn the repairing chassis 180 degrees in the arrow direction ❷.
3 Insert the 2 claws ❸ into main chassis.
4 Lock to the main chassis by 2 screws (M3 × 6) ❹.

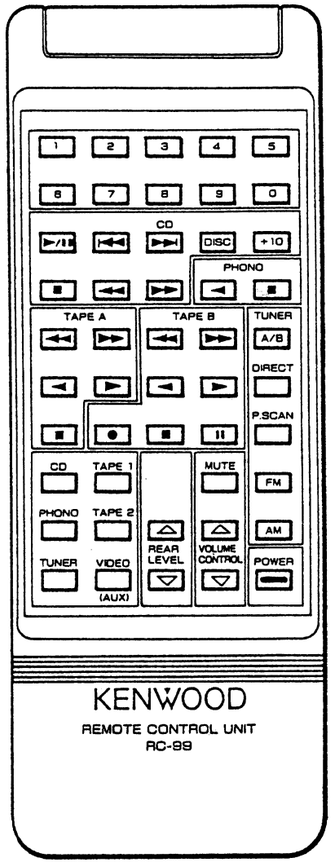


NAME AND OPERATION OF CONTROL

Functions of keys

Caution in remote control

- In case any of the following CD players is used, this remote control unit cannot be used to control the CD manual search function or to make entries with the numeric keys (1 to 0 and +10):
  *DP-M97, DP-57, DP-47
- If the CD player is not equipped with the SYSTEM CONTROL terminal, it cannot be operated properly from this remote control unit.
  In such a case, please use the remote control unit provided with the CD player.



KA-4520

ADJUSTMENT/REGLAGE/ABGLEICH

ADJUSTMENT

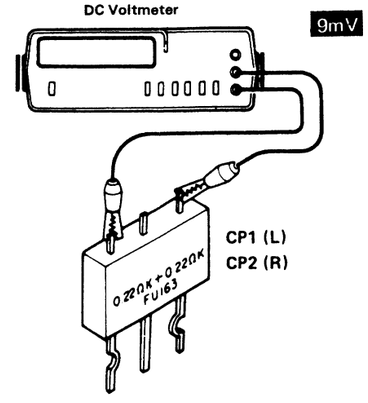
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Set the controls and switches as follows: POWER: ON SPEAKER: B							
1	IDLE CURRENT	–	Connect a DC voltmeter across CP1 (L) CP2 (R)	VOLUME: 0	VR1 (L) VR2 (R)	9mV	(a)

REGLAGES

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINS L'ALIGNEMENT	ALIGNER POUR	FIG.
Régler les controles et les boutons comme suit: POWER: ON SPEAKER: B							
1	COURANT DE POLARISATION	–	Connecter un voltmètre de CC sur CP1 (G) CP2 (D)	VOLUME: 0	VR1 (G) VR2 (D)	9mV	(a)

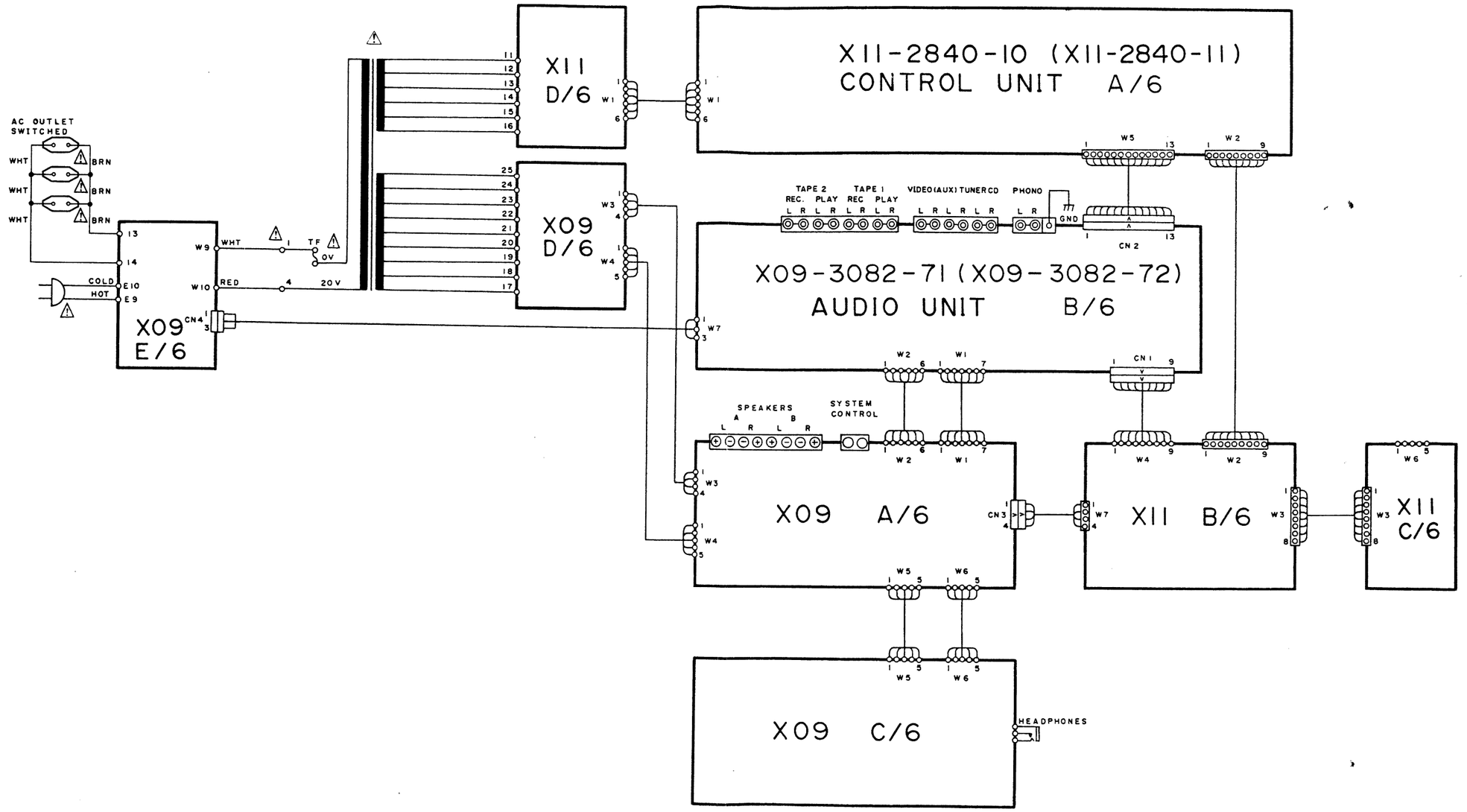
ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VORSTÄRKER EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
Die Regler und Knöpfe wird folgt einstellen: POWER: ON SPEAKER: B							
1	LEERLAUFSTROM	–	Einen Gleichspannungs-messer uber CP1 (L) CP2 (R) anschließen	VOLUME: 0	VR1 (L) VR2 (R)	9mV	(a)



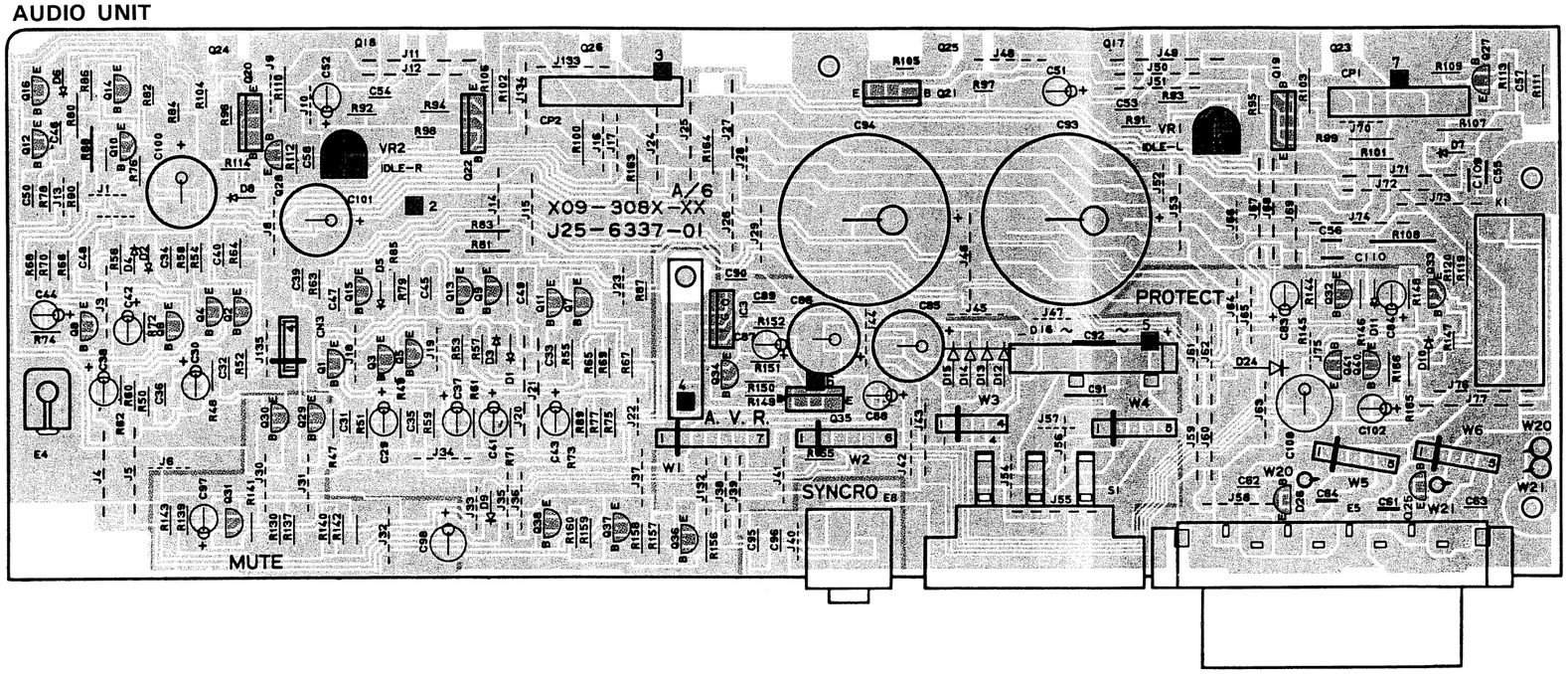
(a)

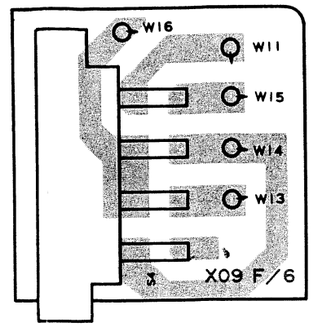
WIRING DIAGRAM

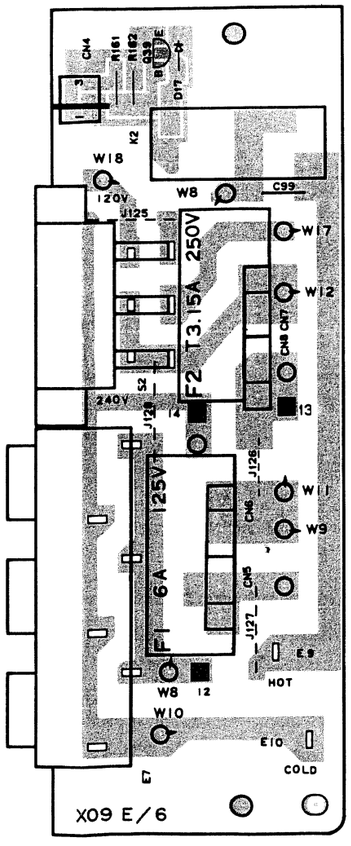


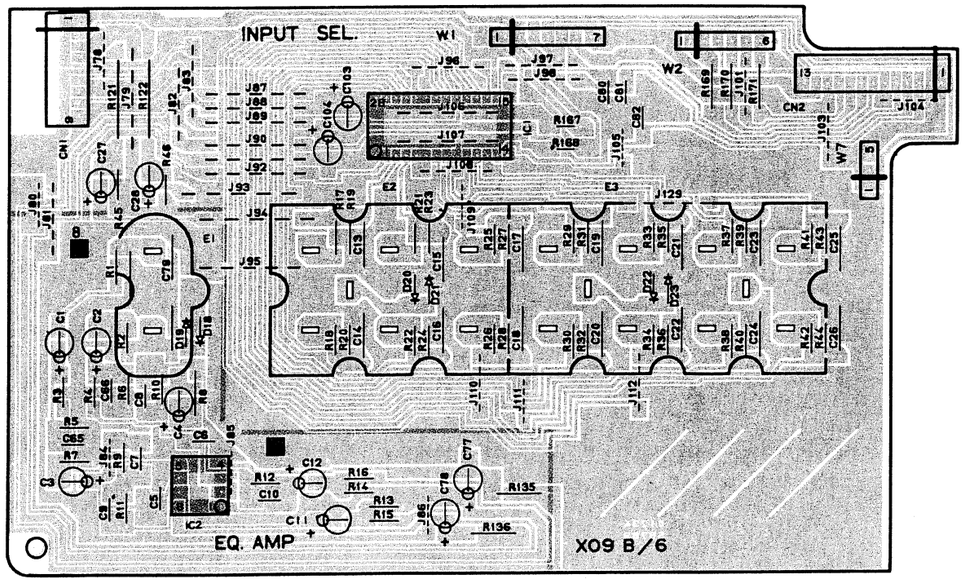
PC BOARD (Component Side View)

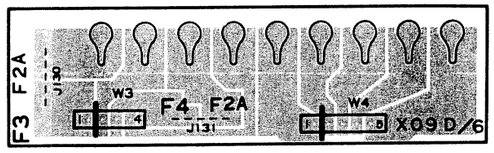
AUDIO UNIT

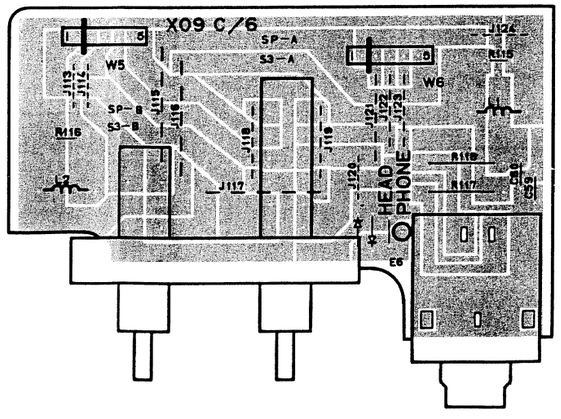












X09-308X-XX

Ref. No.		Address
IC	Q	
	1	3B
	2	3B
	3	3B
	4	3B
	5	3C
	6	3B
	7	2C
	8	3A
	9	2C
	10	2A
	11	2C
	12	2A
	13	2C
	14	2A
	15	2B
	16	2A
	17	
	18	
	19	2F
	20	2B
	21	2E
	22	2C
	23	
	24	
	25	3G
	26	3F
	27	2G
	28	2B
	29	3B
	30	3B
	31	3B
	32	2F
	33	2G
	34	3D
	35	3D
	36	3D
	37	3C
	38	3C
	39	3H
	40	3G
	41	3F
1		5C
2		6B
3		3D

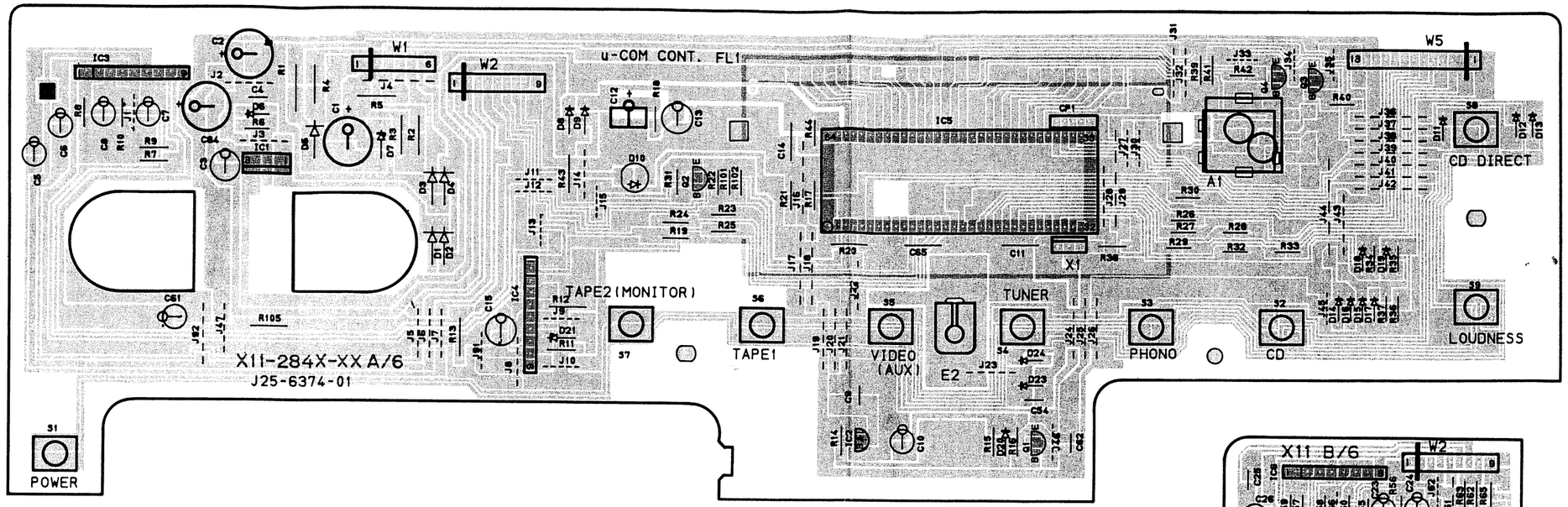
Refer to the schematic diagram for the values of resistors and capacitors.

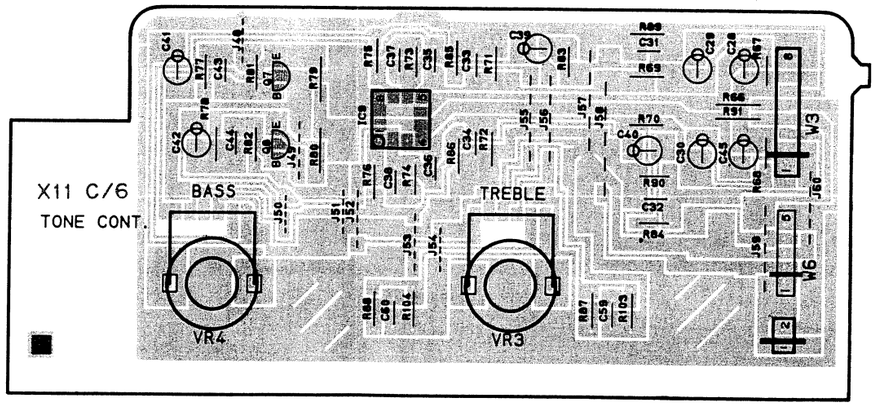
PC BOARD (Component Side View)

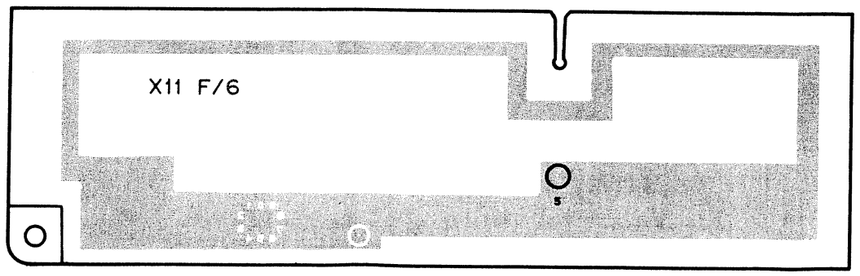
X11-284X-XX

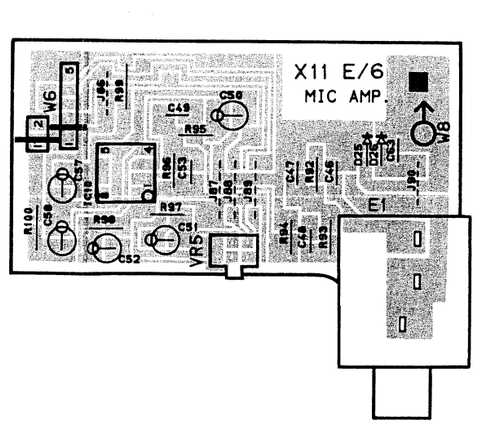
Ref. No.		Address
IC	Q	
	1	3P
	2	2N
	3	2R
	4	2Q
	5	5R
	6	5R
	7	4L
	8	4L
1		2L
2		3O
3		2K
4		3N
5		2P
6		3Q
7		5R
9		4M
10		4O

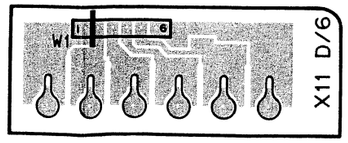
CONTROL UNIT

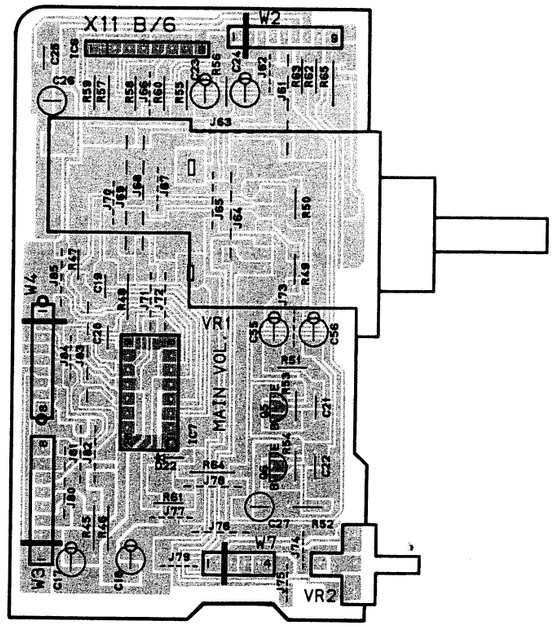












Refer to the schematic diagram for the values of resistors and capacitors.

(X09-3080-10)(A/6)

IC2	: UPC4570C-A	Q17.18	: 2SC4137	Q32	: 2SA1123(R,S)	D1~10	: 1SS131 or HSS104A
IC3	: UPC7812HF	Q19.20	: 2SC3944(Q,R,S)	Q31.34.37	: 2SA733(A)(Q,P) or 2SA933S(Q,R)	D11	: RD4.7ES(B) or HZS4.7N(B)
		Q21.22	: 2SA1535(Q,R,S)	Q33	: 2SC2003(L,K)	D12~15.24	: S5566B
Q1~4	: 2SC1845(F,E)	Q23.24	: 2SC2921	Q35	: 2SB941	D16	: RBV-602LFA
Q5~8	: 2SA992(F,E)	Q25.26	: 2SA1215	Q36.38.40.41	: 2SC945(A)(Q,P) or 2SC1740S(Q,R)	D25.26	: MA177
Q9~14	: 2SC2632(Q,R,S)	Q27.28	: 2SC2631(R,S)				
Q15.16	: 2SA1124(Q,R,S)	Q29.30	: 2SC2878(B)				

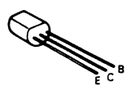
(X09-3082-71)(B/6)JAPAN MADE
(X09-3082-72)(B/6)SINGAPORE MADE

(X09-308X-XX)(A/6)

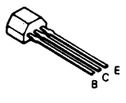
(X09-)(C/6)

(X09-308X-XX)(B/6)
IC1 : TC9163N
D18~23 : 1SS131 or HSS104A

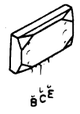
2SA1123
2SA1124
2SA733 (A)
2SA992
2SC1845
2SC2003
2SC2631
2SC2632
2SC2878
2SC945 (A)



2SA933S
2SC1740S



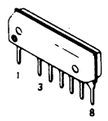
2SA1215
2SC2921



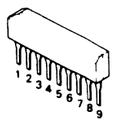
2SC4137

2SA1535
2SB941
2SC3944

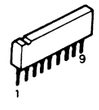
TC9215P



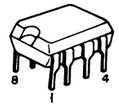
TA8409S



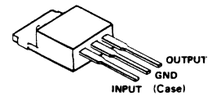
BA6138



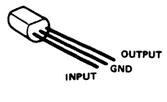
μPC4570C-A



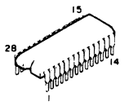
μPC7805H
μPC7812HF



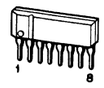
M51951ASL



TC9163N



NJM4565L



SA1123(R,S)
SA733(A)(Q,P) or 2SA933S(Q,R)
SC2003(L,K)
9B941
SC945(A)(Q,P)or 2SC1740S(Q,R)

D1~10 : 1SS131 or HSS104A
D11 : RD4.7ES(B) or HZS4.7N(B)
D12~15.24 : S5566B
D16 : RBV-602LFA
D25.26 : MA177

(X11-2840-10)(A/6) JAPAN MADE
(X11-2840-11)(A/6) SINGAPORE MADE

(X09-)(C/6)

SPEAKER SELECTOR

PHONES

SPEAKERS B Rch Lch

SPEAKERS A Rch Lch

PEDANCE SELECTOR

MOTOR DRIVE

LEVEL AMP

ON STANDBY LED

RESET

REMOCON

MAIN VOL

BALANCE

TREBLE

BASS

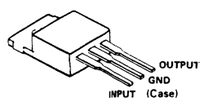
(X11-284X-XX)(C/6)
IC9 : UPC4570C-A
Q7,8 : 2SC1845(F,E)

(E) TYPE
(X09-3082-71)(E/6) JAPAN MADE
(X09-3082-72)(E/6) SINGAPORE MADE

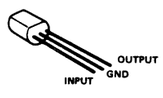
(X11-284X-XX)(B/6)
IC6 : NJM4565L
IC7 : TC9215P
Q5,6 : 2SC2878(B)
Q22 : 1SS133 or HSS104

(X09-308X-XX)(E/6)
Q39 : 2SC2003(L,K)
D17 : 1SS131 or HSS104A

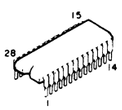
μPC7805H
μPC7812HF



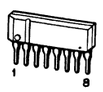
M51951ASL



TC9163N



NJM4565L

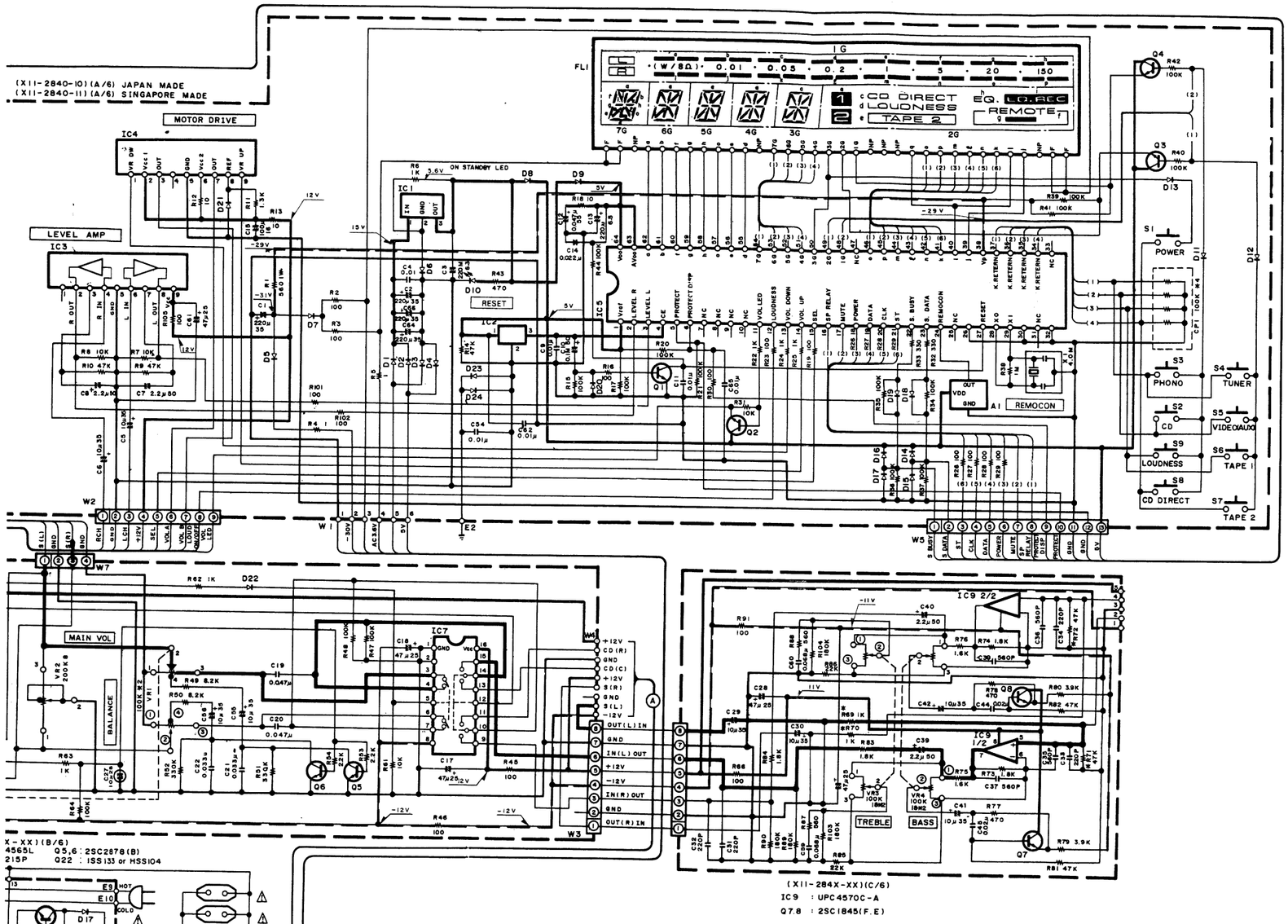


DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



(X11-284X-XX)(A/6)

FL1	: FIP7AM7R
IC1	: UPC7805H
IC2	: M5/951ASL
IC3	: BA6138
IC4	: TAB4095
IC5	: M50940-197SP
Q1~4	: 2SC945(A)(Q,P) or 2SC1740S(Q,R)
D1~5	: S5566B
D6.8.9.11~20 23.24	: ISS133 or HSS104
D7	: RD5.6ES(B2) or HZS5.6N(B2)
D21	: RD3.9ES(B2) or HZS3.9N(B2)
A1	: FIP7AM7R

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

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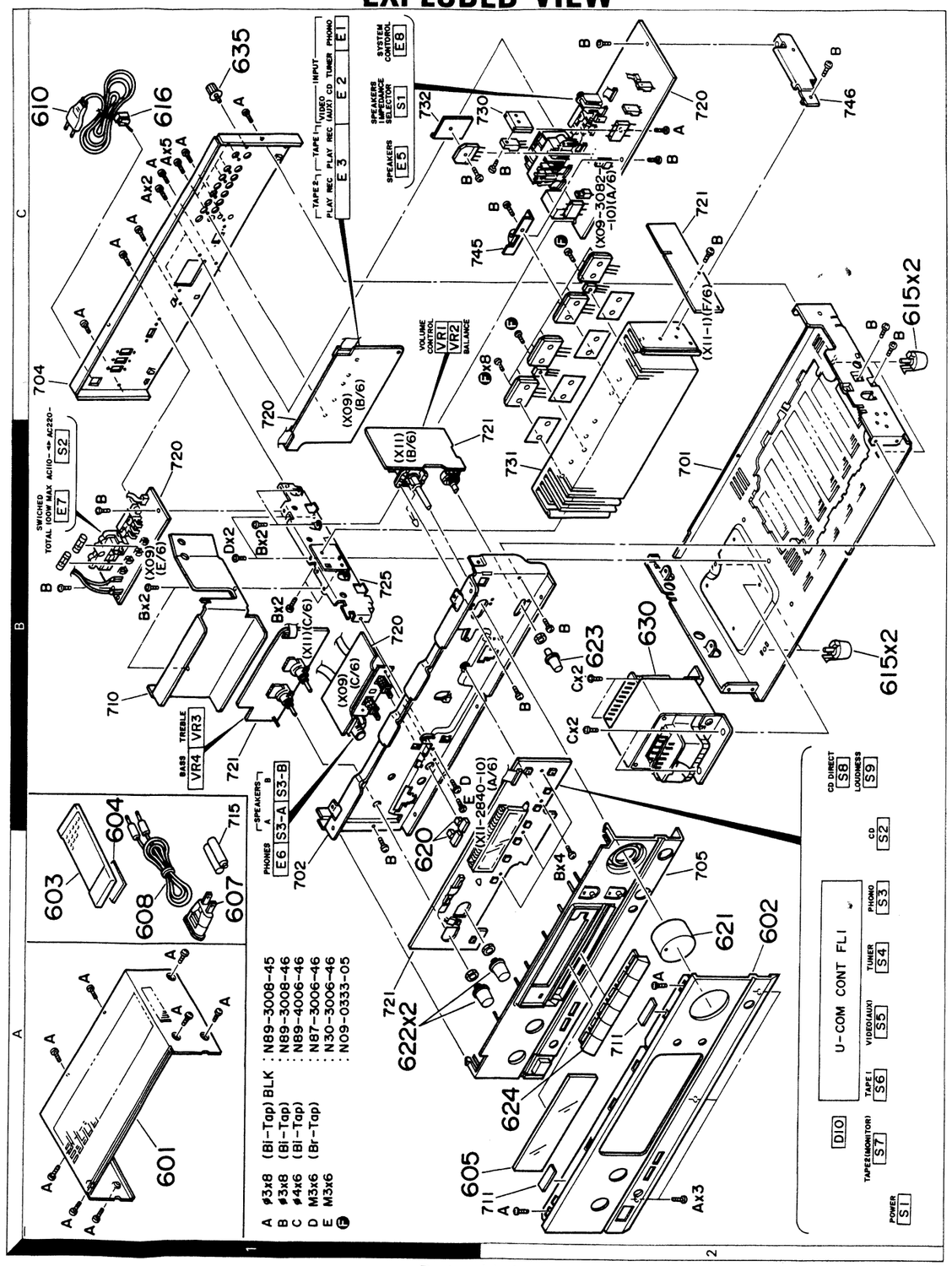
SIGNAL LINE
GND LINE
+B LINE
-B LINE

Y08-4042-71

KA-4520
KENWOOD

EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
KA-4520 (JAPAN MADE)						
601	1A	*	A01-1834-01	METALLIC CABINET		
602	2A	*	A20-6008-02	PANEL		
603	1A,1B	*	A70-0343-05	REMOTE CONTROLLER ASSY		
604	1A		A09-0078-08	BATTERY COVER		
605	2A	*	B10-1078-03	FRONT GLASS		
606	2A		B43-0287-04	KENWOOD BADGE		
-			B46-0122-13	WARRANTY CARD		
-			B58-0803-13	CAUTION CARD		
-		*	B60-0096-00	INSTRUCTION MANUAL (E,F,G,D,I)		
608	1A,1B		E30-0977-05	CORD WITH PLUG		
609	1A,1B		E30-1392-05	CORD WITH PLUG		
⚠ 610	1C		E30-0459-05	AC POWER CORD		
⚠ E7	1B		E03-0055-05	AC OUTLET		
-		*	H01-8750-04	ITEM CARTON CASE		
-		*	H10-3971-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-3972-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
615	2B,2C		J02-1034-05	FOOT		
⚠ 616	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
620	1B	*	K27-2014-04	KNOB (BUTTON)(SPEAKERS)		
621	2A		K29-3744-04	KNOB (VOLUME CONTROL)		
622	1A,2A	*	K29-3909-04	KNOB (BASS,TREBLE)		
623	2B	*	K29-3911-04	KNOB (BALANCE)		
624	2A	*	K29-3914-03	KNOB (INPUT SELECTOR)		
⚠ 630	2B	*	L07-0077-05	POWER TRANSFORMER		
635	1C		N08-0128-35	BINDING POST (EARTH)		
A	2B		N30-3006-46	PAN HEAD MACHINE SCREW		
B	2B,3C		N87-3006-46	BRAZIER HEAD TAPTITE SCREW		
C	1A,1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	1B,2B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
E	2B		N89-4006-46	BINDING HEAD TAPTITE SCREW		
KA-4520 (SINGAPORE MADE)						
601	1A	*	A01-1834-01	METALLIC CABINET		
602	2A	*	A20-6008-02	PANEL		
603	1A,1B	*	A70-0343-05	REMOTE CONTROLLER ASSY		
604	1A		A09-0078-08	BATTERY COVER		
605	2A	*	B10-1078-03	FRONT GLASS		
606	2A	*	B43-0287-04	KENWOOD BADGE		
-			B46-0122-13	WARRANTY CARD		
-			B58-0803-13	CAUTION CARD		
-		*	B60-0096-00	INSTRUCTION MANUAL (E,F,G,D,I)		
608	1A,1B		E30-0977-05	CORD WITH PLUG		
609	1A,1B		E30-1392-05	CORD WITH PLUG		
⚠ 610	1C		E30-0459-05	AC POWER CORD		
⚠ E7	1B		E03-0055-05	AC OUTLET		
-		*	H01-8794-04	ITEM CARTON CASE		
-		*	H10-5001-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-5002-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		

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KA-4520

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-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
615	2B,2C		J02-1034-05	FOOT		
⚠ 616	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
620	1B	*	K27-2014-04	KNOB (BUTTON)(SPEAKERS)		
621	2A		K29-3744-04	KNOB (VOLUME CONTROL)		
622	1A,2A	*	K29-3909-04	KNOB (BASS,TREBLE)		
623	2B	*	K29-3911-04	KNOB (BALANCE)		
624	2A	*	K29-3914-03	KNOB (INPUT SELECTOR)		
⚠ 630	2B	*	L07-0077-05	POWER TRANSFORMER		
635	1C		N08-0128-35	BINDING POST (EARTH)		
A	2B		N30-3006-46	PAN HEAD MACHINE SCREW		
B	2B,3C		N87-3006-46	BRAZIER HEAD TAPTITE SCREW		
C	1A,1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	1B,2B		N89-3008-46	BINDING HEAD TAPTITE SCREW		
E	2B		N89-4006-46	BINDING HEAD TAPTITE SCREW		
AUDIO UNIT (X09-3082-71: J 2-72: S)						
C1 ,2			CE04KW1H100M	ELECTRO 10UF 50WV		J
C1 ,2			CE04LW1H100M	ELECTRO 10UF 50WV		S
C3 ,4			CE04KW1A101M	ELECTRO 100UF 10WV		J
C3 ,4			CE04LW1A101M	ELECTRO 100UF 10WV		S
C5 ,6			CK45FB1H561K	CERAMIC 560PF K		
C7 ,8			CF92FV1H123J	MF 0.012UF J		
C9 ,10			CF92FV1H332J	MF 3300PF J		
C11 ,12			CE04KW1H4R7M	ELECTRO 4.7UF 50WV		J
C11 ,12			CE04LW1H4R7M	ELECTRO 4.7UF 50WV		S
C13 -26			C91-0749-05	CERAMIC 220PF K		
C27 -30			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		J
C27 -30			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		S
C31 ,32			CC45FSL1H221J	CERAMIC 220PF J		
C33 ,34			CF92FV1H472J	MF 4700PF J		
C35 ,36			CC45FSL1H101J	CERAMIC 100PF J		
C37 ,38			CE04KW1A101M	ELECTRO 100UF 10WV		J
C37 ,38			CE04LW1A101M	ELECTRO 100UF 10WV		S
C39 ,40			CC45FSL1H070C	CERAMIC 7.0PF C		
C41 -44			CE04KW1H010M	ELECTRO 1.0UF 50WV		J
C41 -44			CE04LW1H010M	ELECTRO 1.0UF 50WV		S
C45 ,46			CC45FSL1H331J	CERAMIC 330PF J		
C47 ,48			CC45FSL1H040C	CERAMIC 4.0PF C		
C49 ,50			CC45FSL1H390J	CERAMIC 39PF J		
C51 ,52			CE04KW1H010M	ELECTRO 1.0UF 50WV		J
C51 ,52			CE04LW1H010M	ELECTRO 1.0UF 50WV		S
C53 ,54			CK45FF1H103Z	CERAMIC 0.010UF Z		
C55 ,56			CF92FV1H104J	MF 0.10UF J		
C57 ,58			CF92FV1H222J	MF 2200PF J		
C59 ,60			CC45FSL1H221J	CERAMIC 220PF J		
C61			CF92FV1H472J	MF 4700PF J		
C62 ,63			CF92FV1H472J	MF 4700PF J		
C64			CF92FV1H472J	MF 4700PF J		
C65 ,66			CC45FSL1H221J	CERAMIC 220PF J		
C77 ,78			CE04KW1C220M	ELECTRO 22UF 16WV		J
C77 ,78			CE04LW1C220M	ELECTRO 22UF 16WV		S

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	C79			C91-0769-05	CERAMIC	0.01UF	M		
	C80 ,81			CK45FB1H102K	CERAMIC	1000PF	K		
	C82			CK45FB1H332K	CERAMIC	3300PF	K		
	C83			CE04KW1H4R7M	ELECTRO	4.7UF	50WV		J
	C83			CE04LW1H4R7M	ELECTRO	4.7UF	50WV		S
	C84			CE04KW1H010M	ELECTRO	1.0UF	50WV		J
	C84			CE04LW1H010M	ELECTRO	1.0UF	50WV		S
	C85 ,86			CE04KW1E102M	ELECTRO	1000UF	25WV		J
	C85 ,86			CE04LW1E102M	ELECTRO	1000UF	25WV		S
	C87			CE04KW1E470M	ELECTRO	47UF	25WV		J
	C87			CE04LW1E470M	ELECTRO	47UF	25WV		S
	C88			CE04KW1C470M	ELECTRO	47UF	16WV		J
	C88			CE04LW1C470M	ELECTRO	47UF	16WV		S
	C89 ,90			CF92FV1H104J	MF	0.10UF	J		
	C91 ,92			CK45FE2H103P	CERAMIC	0.010UF	P		
	C93 ,94			C90-1645-05	ELECTRO	8200UF	80WV		
	C95 ,96			CC45FSL1H101J	CERAMIC	100PF	J		
	C97			CE04KW1H3R3M	ELECTRO	3.3UF	50WV		J
	C97			CE04LW1H3R3M	ELECTRO	3.3UF	50WV		S
	C98			CE04KW0J221M	ELECTRO	220UF	6.3WV		J
	C98			CE04LW0J221M	ELECTRO	220UF	6.3WV		S
⚠	C99			C91-0647-05	CERAMIC	0.01UF	P		
	C100,101			CE04KW2A101M	ELECTRO	100UF	100WV		
	C102			CE04KW1A101M	ELECTRO	100UF	10WV		J
	C102			CE04LW1A101M	ELECTRO	100UF	10WV		S
	C103,104			CE04KW1C220M	ELECTRO	22UF	16WV		J
	C103,104			CE04LW1C220M	ELECTRO	22UF	16WV		S
	C108			CE04KW1V331M	ELECTRO	330UF	35WV		J
	C108			CE04LW1V331M	ELECTRO	330UF	35WV		S
	C109,110			CF92FV1H104J	MF	0.10UF	J		
	E1		*	E13-0259-05	PHONO JACK(2P)(PHONO)				
	E2		*	E13-0637-05	PHONO JACK(6P)(CD,TUNER,AUX)				
	E3			E13-0826-05	PHONO JACK (TAPE)				
	E5			E20-0823-05	TERMINAL BOARD(8P)(SPEAKER)				
	E6			E11-0189-05	PHONE JACK (PHONES)				
	E8			E11-0188-05	PHONE JACK (SYSTEM CONTROL)				
⚠	F1 ,2			F05-2525-05	FUSE (SEMKO) (250V T2.5A)				
	CN5 -8			J13-0075-05	FUSE CLIP				
	L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL				
	C	2C		N89-3008-45	BINDING HEAD TAPTITE SCREW				
	D	2C		N89-3008-46	BINDING HEAD TAPTITE SCREW				
	F	2C		N09-0333-05	TAPPING SCREW (3X12,+ロッカクサ")				
	G	2C		N35-3008-46	BINDING HEAD MACHINE SCREW				
	CP1 ,2			R90-0187-05	MULTI-COMP	0.22X2	K 5W		
	R81			RD14GB2E221J	FL-PROOF RD	220	J 1/4W		
	R82			RD14NB2E221J	RD	220	J 1/4W		
	R83			RD14GB2E221J	FL-PROOF RD	220	J 1/4W		
	R84			RD14NB2E221J	RD	220	J 1/4W		
	R87			RD14NB2E101J	RD	100	J 1/4W		
	R88			RD14GB2E101J	FL-PROOF RD	100	J 1/4W		
	R95 -98			RD14NB2E220J	RD	22	J 1/4W		
	R99 -101			RD14AB2E331J	FL-PROOF RD	330	J 1/4W		J

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R99 -102			RD14GB2E331J	FL-PROOF RD 330 J 1/4W		S
R102			RD14GB2E331J	FL-PROOF RD 330 J 1/4W		J
R103			RD14AB2E2R2J	FL-PROOF RD 2.2 J 1/4W		J
R103			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		S
R104,105			RD14NB2E2R2J	RD 2.2 J 1/4W		
R106			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R107,108			RS14DB3D100J	FL-PROOF RS 10 J 2W		J
R107,108			RS14KB3D100J	FL-PROOF RS 10 J 2W		S
R115,116			RD14NB2E100J	RD 10 J 1/4W		
R117,118			RS14DB3D561J	FL-PROOF RS 560 J 2W		J
R117,118			RS14KB3D561J	FL-PROOF RS 560 J 2W		S
R147			RD14NB2E100J	RD 10 J 1/4W		
R163,164			RD14AB2E6R8J	FL-PROOF RD 6.8 J 1/4W		J
R163,164			RD14GB2E6R8J	FL-PROOF RD 6.8 J 1/4W		S
R167,168			RD14NB2E220J	RD 22 J 1/4W		
VR1 ,2			R12-1083-05	TRIM POT. 1K		
K1			S51-2092-05	MAGNETIC RELAY		
⚠ K2			S51-1052-05	MAGNETIC RELAY		
S1			S31-2136-05	SLIDE SWITCH (POWER TYPE)		
S3			S42-2163-05	MULTIPLE PUSH SWITCH		
D1 -10			HSS104A	DIODE		
D1 -10			1SS131	DIODE		
D11			HZS4.7N(B)	ZENER DIODE		
D11			RD4.7ES(B)	ZENER DIODE		
D12 -15			S5566B	DIODE		
D16			RBV-602LFA	DIODE		
D17 -23			HSS104A	DIODE		
D17 -23			1SS131	DIODE		
D24			S5566B	DIODE		
D25 ,26			MA177	DIODE		
IC1			TC9163N	IC(BILATERAL SWITCH X16)		
IC2			UPC4570C-A	IC(OP AMP X2)		
IC3			UPC7812HF	IC(VOLTAGE REGULATOR/ +12V)		
Q1 -4			2SC1845(F,E)	TRANSISTOR		
Q5 -8			2SA992(F,E)	TRANSISTOR		
Q9 -14			2SC2632(Q,R,S)	TRANSISTOR		
Q15 ,16			2SA1124(Q,R,S)	TRANSISTOR		
Q17 ,18			2SC4137	TRANSISTOR		
Q19 ,20			2SC3944(Q,R,S)	TRANSISTOR		
Q21 ,22			2SA1535(Q,R,S)	TRANSISTOR		
Q23 ,24			2SC2921	TRANSISTOR		
Q25 ,26			2SA1215	TRANSISTOR		
Q27 ,28			2SC2631(R,S)	TRANSISTOR		
Q29 ,30			2SC2878(B)	TRANSISTOR		
Q31			2SA733(A)(Q,P)	TRANSISTOR		
Q31			2SA933S(Q,R)	TRANSISTOR		
Q32			2SA1123(R,S)	TRANSISTOR		
Q33			2SC2003(L,K)	TRANSISTOR		
Q34			2SA733(A)(Q,P)	TRANSISTOR		
Q34			2SA933S(Q,R)	TRANSISTOR		
Q35			2SB941	TRANSISTOR		
Q36			2SC1740S(Q,R)	TRANSISTOR		
Q36			2SC945(A)(Q,P)	TRANSISTOR		
Q37			2SA733(A)(Q,P)	TRANSISTOR		

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KA-4520

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Q37			2SA933S(Q,R)	TRANSISTOR				
Q38			2SC1740S(Q,R)	TRANSISTOR				
Q38			2SC945(A)(Q,P)	TRANSISTOR				
Q39			2SC2003(L,K)	TRANSISTOR				
Q40 ,41			2SC1740S(Q,R)	TRANSISTOR				
Q40 ,41			2SC945(A)(Q,P)	TRANSISTOR				
CONTROL UNIT (X11-2840-10: J 0-11: S)								
D10			B30-1291-05	LED				
C1 ,2			CE04DW1V221M	ELECTRO	220UF	35WV		
C3			CE04KW0J221M	ELECTRO	220UF	6.3WV		J
C3			CE04LW0J221M	ELECTRO	220UF	6.3WV		S
C4			CF92FV1H103J	MF	0.010UF	J		
C5 ,6			CE04KW1V100M	ELECTRO	10UF	35WV		J
C5 ,6			CE04LW1V100M	ELECTRO	10UF	35WV		S
C7 ,8			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		J
C7 ,8			CE04LW1H2R2M	ELECTRO	2.2UF	50WV		S
C9			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C10			CE04KW1H0R1M	ELECTRO	0.1UF	50WV		J
C10			CE04LW1H0R1M	ELECTRO	0.1UF	50WV		S
C11			C91-0769-05	CERAMIC	0.01UF	M		
C12			C91-0928-05	BACKUP C	0.047F	5.5WV		
C13			CE04KW0J221M	ELECTRO	220UF	6.3WV		J
C13			CE04LW0J221M	ELECTRO	220UF	6.3WV		S
C14			C91-0085-05	CERAMIC	0.022UF	N		
C15			CE04KW1C101M	ELECTRO	100UF	16WV		J
C15			CE04LW1C101M	ELECTRO	100UF	16WV		S
C17 ,18			CE04KW1E470M	ELECTRO	47UF	25WV		J
C17 ,18			CE04LW1E470M	ELECTRO	47UF	25WV		S
C19 ,20			CF92FV1H473J	MF	0.047UF	J		
C21 ,22			CF92FV1H333J	MF	0.033UF	J		
C23 ,24			CE04KW1V100M	ELECTRO	10UF	35WV		J
C23 ,24			CE04LW1V100M	ELECTRO	10UF	35WV		S
C25			CF92FV1H104J	MF	0.10UF	J		
C26			C90-1333-05	NP-ELEC	22UF	10WV		
C27			C90-1353-05	NP-ELEC	10UF	25WV		
C28			CE04KW1E470M	ELECTRO	47UF	25WV		J
C28			CE04LW1E470M	ELECTRO	47UF	25WV		S
C29 ,30			CE04KW1V100M	ELECTRO	10UF	35WV		J
C29 ,30			CE04LW1V100M	ELECTRO	10UF	35WV		S
C31 -34			CC45FSL1H221J	CERAMIC	220PF	J		
C35 -38			CK45FB1H561K	CERAMIC	560PF	K		
C39 ,40			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		J
C39 ,40			CE04LW1H2R2M	ELECTRO	2.2UF	50WV		S
C41 ,42			CE04KW1V100M	ELECTRO	10UF	35WV		J
C41 ,42			CE04LW1V100M	ELECTRO	10UF	35WV		S
C43 ,44			CF92FV1H203J	MF	0.020UF	J		
C45			CE04KW1E470M	ELECTRO	47UF	25WV		J
C45			CE04LW1E470M	ELECTRO	47UF	25WV		S
C54			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C55 ,56			CE04KW1V100M	ELECTRO	10UF	35WV		J
C55 ,56			CE04LW1V100M	ELECTRO	10UF	35WV		S
C59 ,60			CF92FV1H683J	MF	0.068UF	J		
C61			CE04KW1E470M	ELECTRO	47UF	25WV		J

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C61			CE04LW1E470M	ELECTRO 47UF 25WV		S
C62			CK45FF1H103Z	CERAMIC 0.010UF Z		
C64			CE04DW1V221M	ELECTRO 220UF 35WV		
C65			C91-0769-05	CERAMIC 0.01UF M		
C66			CE04DW1V221M	ELECTRO 220UF 35WV		
X1			L78-0244-05	RESONATOR 4.0MHz		
CP1			R90-0482-05	MULTI-COMP 100KX4 J 1/6W		
R1			RS14KB3A561J	FL-PROOF RS 560 J 1W		
R2 ,3			RD14NB2E101J	RD 100 J 1/4W		
R4 ,5			RD14NB2E1R0J	RD 1.0 J 1/4W		
VR1			R29-5037-05	POTENTIOMETER(100KX2)(MAIN VR)		
VR2			R01-5072-05	POTENTIOMETER(200K) (BALANCE)		
VR3 ,4			R06-3068-05	POTENTIOMETER(100KX2)(BAS,TRE)		
S1 -9			S40-1064-05	PUSH SWITCH		
D1 -5			S5566B	DIODE		
D6			HSS104	DIODE		
D6			1SS133	DIODE		
D7			HZS5.6N(B2)	ZENER DIODE		
D7			RD5.6ES(B2)	ZENER DIODE		
D8 ,9			HSS104	DIODE		
D8 ,9			1SS133	DIODE		
D11 -20			HSS104	DIODE		
D11 -20			1SS133	DIODE		
D21			HZS3.9N(B2)	ZENER DIODE		
D21			RD3.9ES(B2)	ZENER DIODE		
D22 -24			HSS104	DIODE		
D22 -24			1SS133	DIODE		
FL1		*	FIP7AM7R	FLUORESCENT INDICATOR TUBE		
IC1			UPC7805H	IC(VOLTAGE REGULATOR/ +5V)		
IC2			M51951ASL	IC(SYSTEM RESET)		
IC3			BA6138	IC(ROOT AMP X2)		
IC4			TA8409S	IC(MOTOR CONTROL)		
IC5		*	M50940-197SP	IC		
IC6			NJM4565L	IC		
IC7			TC9215P	IC(ANALOG SWITCH X 6)		
IC9			UPC4570C-A	IC(OP AMP X2)		
Q1 -4			2SC1740S(Q,R)	TRANSISTOR		
Q1 -4			2SC945(A)(Q,P)	TRANSISTOR		
Q5 ,6			2SC2878(B)	TRANSISTOR		
Q7 ,8			2SC1845(F,E)	TRANSISTOR		
A1			W02-0975-05	ELECTRIC CIRCUIT MODULE		
A1			W02-1043-05	OPTIC RECEIVING MODULE		

E: Scandinavia & Europe K: USA P: Canada
Y: PX(Far East, Hawaii) T: England M: Other Areas
Y: AAFES(Europe) X: Australia

J: JAPAN MADE
S: SINGAPORE MADE

⚠ indicates safety critical components.

KA-4520

SPECIFICATIONS

Maximum Continuous Power Output	
(IHF '66) from 20 Hz to 20,000 Hz, 0.03% T.H.D. at 8 Ω	110 W + 110 W
(IEC) from 63 Hz to 12,500 Hz, 0.7% T.H.D. at 8 Ω	110 W + 110 W
(DIN) 1,000 Hz at 8 Ω	110 W + 110 W
Total Harmonic Distortion LINE input to SPEAKER output	
(20 Hz to 20,000 Hz)	0.03 % at 1/2 rated power into 8 Ω
(1 kHz)	0.01 % at 1/2 rated power into 8 Ω
Inter Modulation Distortion (60 Hz:7 kHz = 4:1)	0.03 % at rated power into 8 Ω
Frequency Response	10 Hz to 50 kHz, +0 dB, −3 dB
Input Sensitivity/Impedance	
Phono	2.5 mV/47 kΩ
Tuner, Tape play, CD, AUX, VIDEO	150 mV/47 kΩ
Signal-to-Noise Ratio (IHF-A)	
Phono	75 dB for 2.5 mV input
Tuner, Tape play, CD, AUX, VIDEO	100 dB
Phono Maximum Input Level	150 mV, T.H.D. 0.3% at 1 kHz
Output Level/Impedance	
Tape REC (Pin)	150 mV/330 Ω
Phono Frequency Response	RIAA standard curve ±0.5 dB (20 Hz to 20,000 Hz)
Tone control	
Bass	±10 dB (at 100 Hz)
Treble	±10 dB (at 10 kHz)
Loudness Control	+8 dB at 100 Hz (at −30 dB VOLUME level)

General

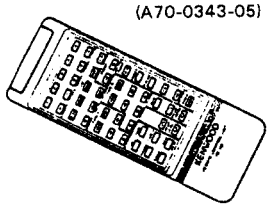
Power Consumption	220 W (IEC)
Dimensions	W : 440 mm H : 133 mm D : 281 mm
Weight (Net)	8.9 kg

Note:

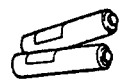
KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Accessories

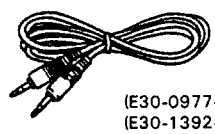
Remote control unit 1
(A70-0343-05)



Battery
("AA" or "R6") 2



System control cord 4



(E30-0977-05)
(E30-1392-05)

KENWOOD CORPORATION
Shionogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD U.S.A. CORPORATION
2201 East Dominguez Street, Long Beach, CA 90810;
550 Clark Drive, Mount Olive, NJ 07828, U.S.A.

KENWOOD ELECTRONICS CANADA INC.
P.O. BOX 1075, 959 Gana Court, Mississauga, Ontario, Canada L4T 4C2

TRIO-KENWOOD U.K. LIMITED
KENWOOD House, Dwight Road, Watford, Herts., WD1 8EB United Kingdom

KENWOOD ELECTRONICS BENELUX N.V.
Mechelsesteenweg 418 B-1930 Zaventem, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH
Rembrücker-Str. 15, 6056 Heusenstamm, West Germany

TRIO-KENWOOD FRANCE S.A.
13 Boulevard Ney, 75018 Paris, France

KENWOOD LINEAR S.p.A.
20125, MILANO-VIA ARBE, 50, ITALY

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. (INCORPORATED IN N.S.W.)
4E Woodcock Place, Lane Cove, N.S.W. 2066, Australia

KENWOOD & LEE ELECTRONICS, LTD.
Wang Kee Building, 4th Floor, 34-37, Connaught Road, Central, Hong Kong